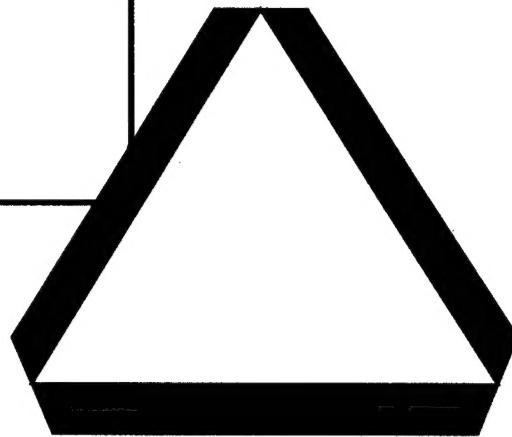
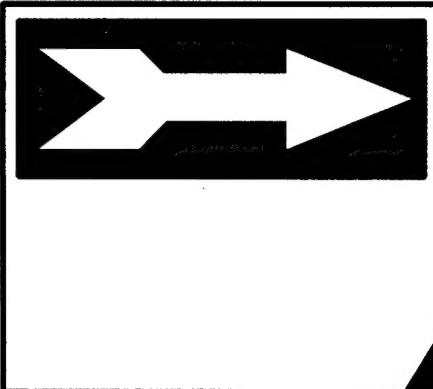
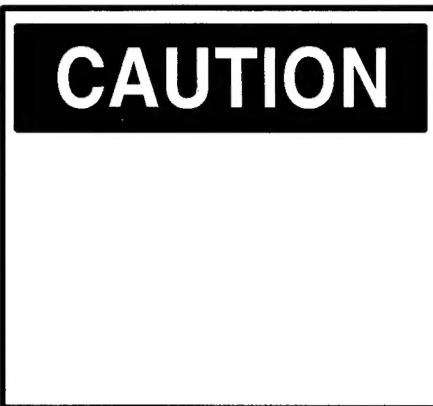


FEBRUARY 1994

# Safety Color Code Markings, Signs, and Tags

# INFORMATION GUIDE



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# Specifications for Accident Prevention Signs

## Wording of signs

Ensure that the wording of any sign—

- Is concise and easy to read.
- Contains enough information to be easily understood.
- Is designed for the message to be carried in the form of a picture when appropriate.
- Is bilingual when appropriate.
- Is positive rather than negative when possible. For example, "Wear rubber gloves when handling" is preferable to "Do not handle without rubber gloves."

## Sign inspection and maintenance

Signs should be inspected regularly and maintained in good condition. They should be kept clean, well-lit, and legible. Replace damaged or broken signs. All signs should be designed with rounded or blunt corners, with no sharp projections. The ends or heads of bolts or other fastening devices should be located in such a way that they do not constitute a hazard.

## Sign size

When choosing a sign, consider dimensions that will permit use of standard-size materials. Base the size of the sign on—

- The location at which the sign will be placed.
- The character of the hazard involved.
- The purpose of the sign.
- The distance from which the sign should be legible.
- The amount of wording the sign will contain.

## Required sign colors

All signs require a predominant color that is based on the sign's purpose. Below are the four types of signs and their characteristic color.

- Danger signs—Red
- Caution signs—Yellow
- Safety instruction signs—Green
- Directional signs—Black

**Note:** Many safety signs, especially international signs, are white on blue background.

## Danger signs

■ **Use.** Use a danger sign only when an immediate hazard exists. There must be no variations in the type or design of signs posted to warn of specific dangers. All personnel should be taught that danger signs indicate immediate danger and that special precautions are necessary.

■ **Design.** Paints with phosphorescent or retroreflective content may be used when safety considerations justify the need for assuring visibility of signs in darkened areas or at night. Design danger signs as follows, and see example at figure 1 and on the front cover.

—Danger signs have a white background with the word "DANGER" appearing in white letters on a red oval. The red oval is placed inside a black rectangular panel. (A white line separating the outside edges of the red oval from the adjacent edge of the black panel may be used.)

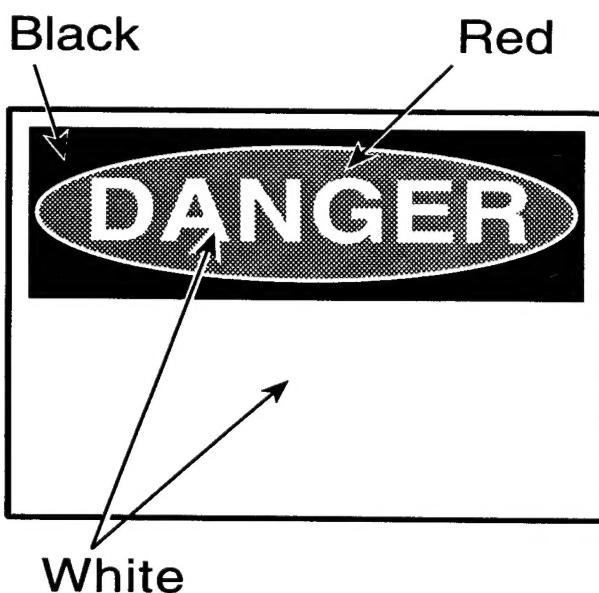


Figure 1. Example of danger sign

—The black rectangular panel should be placed at the top of the sign.

—Wording on the sign should be in black letters on the white background.

—The size of the red oval containing the word DANGER and the size of the letters used for the word DANGER will vary with the outside dimensions of the sign.

■ **Wording.** Danger signs will be worded to warn of specific dangers only. Keep sign wording as brief as possible, but convey all necessary information. The wording may include what the danger is, where it is, and how to avoid it. For examples of wording, see table 1.

## Caution signs

■ **Use.** Use caution signs only to warn against

| Table 1.<br>Examples of wording for danger signs                                      |  |
|---|--|
| DANGER—High Voltage (State maximum voltage when greater than 500 volts.)              |  |
| DANGER—No Smoking, Matches, or Open Light (See note.)                                 |  |
| DANGER—Men Working Above  |  |
| DANGER—Keep Away From Transformer   |  |
| DANGER—Eye Protection Required in This Area   |  |
| DANGER—Crane Overhead   |  |
| DANGER—Keep Off Pole  |  |
| DANGER—Use No Open Light—Flammable  |  |
| DANGER—Artillery Firing in Progress   |  |
| DANGER—Small Arms Firing in Progress  |  |
| DANGER—Ammunition Dud Area  |  |
| DANGER—Blasting   |  |
| DANGER—Do Not Operate, Men Working on Repairs   |  |
| DANGER—Hands Off Switch, Man Working on Line  |  |
| DANGER—Extremely Noise-Hazardous Area—Both Plugs and Muffs Required                   |  |
| DANGER—Extreme Noise-Hazardous Equipment—Both Plugs and Muffs Required when Operating |  |

**NOTE:** For "No Smoking" signs, a rectangular sign using white letters on red background is acceptable.

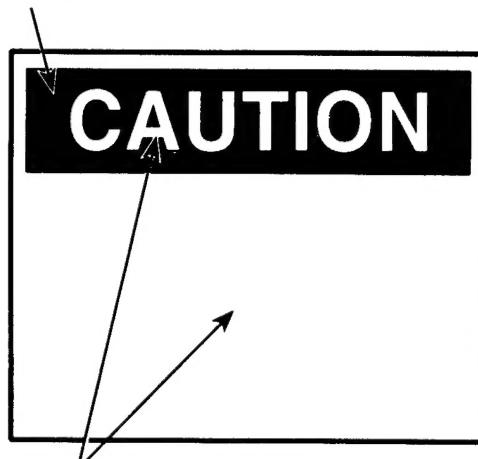
potential hazards or to caution against unsafe practices. All personnel should be taught that a caution sign indicates a possible hazard against which proper precautions will be taken.

■ **Design.** Design caution signs as follows, and see example at figure 2 and on the front cover.

—Caution signs have a yellow background. The word CAUTION appears in yellow letters on a black rectangular panel.

—The black rectangular panel should be placed at the top of the sign.

Black



Yellow

Figure 2. Example of a caution sign

—The size of the black rectangular panel containing the word CAUTION and the size of the letters used for the word CAUTION vary with the outside dimensions of the sign.

■ **Wording.** Caution signs will be worded to warn of possible dangers or unsafe practices. For examples of wording see table 2.

## Safety instruction signs

■ **Use.** Use safety-instruction signs when there is a need for general instructions and suggestions relating to safety.

■ **Design.** Design safety-instruction signs as follows; see example at figure 3 and on the front cover.

—Safety-instruction signs have a white background. Words such as THINK or BE CAREFUL are in white letters on a green rectangular panel.

—The green panel should be placed at the top of the sign.

**Table 2.**  
**Examples of wording for caution signs**

|   |
|---|
| CAUTION—Keep This Door Closed   |
| CAUTION—Electric Trucks, Go Slow  |
| CAUTION—Keep This Space Clear   |
| CAUTION—Stop Machinery To Clean, Oil, Or Repair                                     |
| CAUTION—Wear Snug-Fitting Clothing While Operating This Machine                     |
| CAUTION—Keep Aisles Clear   |
| CAUTION—Flammable—No Smoking Within 50 Feet   |
| CAUTION—Gasoline Will Not Be Used As A Cleaning Fluid                               |
| CAUTION—Close Clearance   |
| CAUTION—Watch Your Step   |
| CAUTION—Electric Fence  |
| CAUTION—Noise Hazardous Area—Hearing Protection Required While Equipment is Running |
| CAUTION—Hearing Protection Required Beyond This Point                               |
| CAUTION—Noise Hazardous Equipment—Hearing Protection Required When Operating        |
| CAUTION—Noise Hazardous Area—Hearing Protection Required Within ___ Feet            |
| CAUTION—Noise Hazardous Equipment—Hearing Protection Required Within ___ Feet       |
| CAUTION—Ultraviolet Light—Wear Eye Protection                                       |

—The sign wording is placed below the panel in black letters on a white background.

—The size of the green panel and the size of the letters for the word or words vary with the outside dimensions of the sign.

■ **Wording.** Safety-instruction signs should be worded to provide information relating to general safe practices. For examples of wording, see table 3.

### Directional signs

■ **Use.** Directional signs should be used to indicate routes to various locations.

■ **Design.** Design directional signs as follows,

Green



**Figure 3. Example of a safety-instruction sign**

**Table 3. Examples of wording for safety-instruction signs**

|   |
|---|
| Report All Injuries to the First Aid Room at Once                             |
| Walk—Don't Run—Avoid Injury   |
| Report All Injuries No Matter How Slight                                      |
| Make Your Workplace Safe Before Starting the Job                              |
| Report All Unsafe Conditions to Your Foreman                                  |
| Keep This Plant Clean and Safe  |
| Lock Out Controls Before Making Electrical Repairs                            |
| Number of Consecutive Days Without a Disabling Injury ( )                     |
| Three Causes of Injuries:<br>I Didn't Look<br>I Didn't Ask<br>I Didn't Listen |

and see example at figure 4 and on the front cover.

—Directional signs have a white background. The arrow pointing the direction should be in white on a black rectangular panel. Any wording in the arrow or below the panel should be in black. Fire exit signs are exceptions to this rule; the lower panel generally has a white background and the arrow pointing the direction will be red. Fire exit signs must

conform to National Fire Protection Association specifications.

—The black panel is placed at the top of the sign.

—The size of the panel and the arrow vary with the outside dimensions of the sign.

■ **Wording.** Directional signs indicate the way to stairways, fire escapes, exits, and other locations. These signs shall not be used in lieu of fire exit signs. For examples of wording, see table 4.

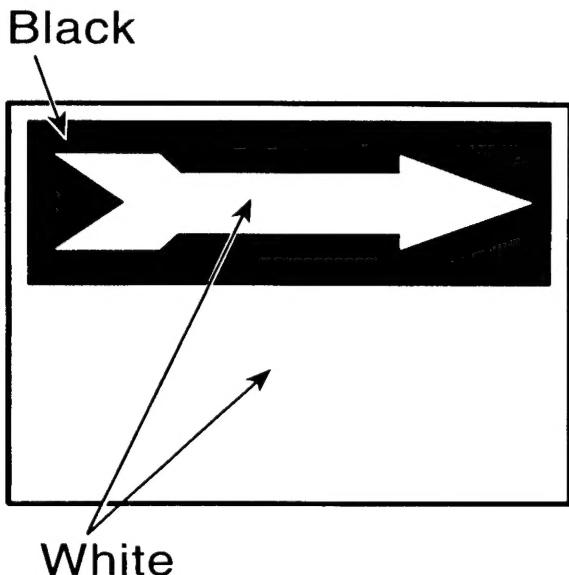


Figure 4. Example of directional sign

**Table 4. Examples of wording for directional signs**

|   |
|---|
| This Way Out (below arrow panel)                              |
| This Way (inside arrow) Out (below arrow panel)               |
| To The (inside arrow) First Aid Station (below panel)         |
| Man way (below arrow panel)                                   |
| This Way To (inside arrow) First Aid Room (below arrow panel) |

## Informational signs

■ **Use.** Use informational signs to convey general information on subjects other than safety to eliminate confusion and misunderstanding.

■ **Design.** Informational signs may be in any of a variety of designs. Colors reserved for hazard

information will not be used for informational signs.

■ **Wording.** Informational signs will carry messages of a general nature such as rules, regulations, and markers when such posting does not conflict with danger or caution notices.

## Marker signs

Marker signs designate certain locations such as offices, entrances, and restrooms. These signs may be of any convenient size and of any desired design except that they will be distinct from the special groupings listed elsewhere in this publication.

## Signs for slow-moving vehicles

■ **Use.** Signs or emblems to identify vehicles that, by design, move slowly (25 mph or less) on public roads and streets. These signs or emblems are neither a clearance marker for wide machinery nor a replacement for required lighting or marking of slow-moving vehicles.

■ **Design.** These signs consist of a fluorescent, yellow-orange triangle with a dark red reflective border. The fluorescent triangle is a highly visible color for daylight exposure. The reflective border defines the shape of the fluorescent color in the daylight and creates a hollow, red triangle in the path of motor vehicle headlights at night. (Figure 5 is an example of a sign for a slow-moving vehicle.)

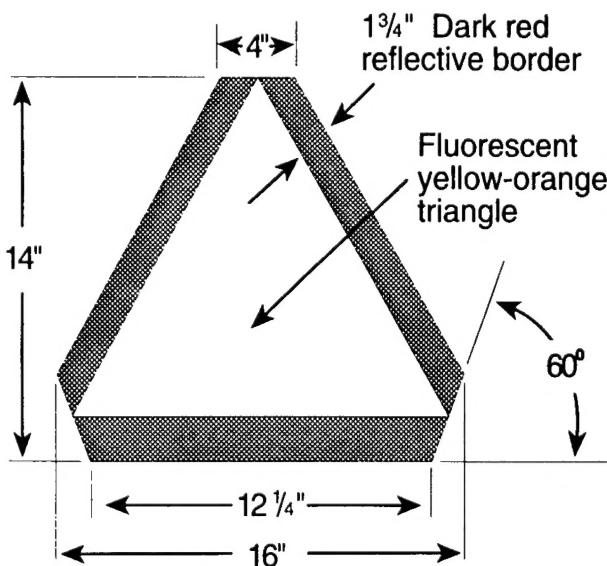


Figure 5. Example of a sign for a slow-moving vehicle

■ **Wording.** These signs will have no letters or words. Do not alter the pattern, sign dimensions, or the backing to permit advertising or other markings.

### Hearing protection signs, labels, and decals

■ **Use.** To warn personnel of hazards associated with exposure to high-intensity noise and the need to wear hearing protection.

#### ■ Posting.

—Noise hazardous areas must be posted as follows: Post entrance to, or periphery of, noise-hazardous areas (85-100 dBA) with appropriate CAUTION sign. See table 2 for sample wording. Post entrance to, or periphery of, *extremely* noise-hazardous areas (101-108 dBA) with appropriate DANGER sign. See table 1 for sample wording.

—Noise-hazardous equipment must be posted as follows: Post noise-hazardous tools and equipment (85-100 dBA) with appropriate CAUTION sign, label, or tag. See table 2 for sample wording. Post *extremely* noise-hazardous tools and equipment (101-108 dBA) with appropriate DANGER sign, label, or tag. See table 1 for sample wording.

—When applicable, post 85 dBA noise contours with CAUTION sign. See table 2 for sample wording. Also, where applicable, apply appropriate floor markings.

—Post all firing ranges and other impulse-noise areas (140 dB<sub>P</sub> and above) with appropriate DANGER signs. Indicate 140 dB<sub>P</sub> noise contours with applicable DANGER signs.

—For noise-hazardous areas or equipment that exceeds 108 dBA or 165 dB<sub>P</sub>, consult the local installation medical authority for proper posting procedures. Daily exposure limits may be imposed. Also, hearing-protection requirements for a particular piece of equipment may be defined in a Health Hazard Assessment Report, and these recommendations will be published in the user's documents (e.g., Technical Guides and Manuals).

#### ■ Design.

—Hearing protection CAUTION signs should conform to specifications in figure 2.

—Hearing protection DANGER signs should

conform to specifications in figure 1.

—Hearing protection CAUTION and DANGER tags will be self-adhesive vinyl. They should appear proportionately identical to corresponding signs.

—Hearing protection CAUTION and DANGER tags should follow criteria in 29 CFR 1910.145. Alternatively, CAUTION and DANGER labels may be affixed to a plain manila tag and used in place of pre-printed tag.

■ **Wording.** Use wording on signs, labels, and tags according to tables 1 and 2.

■ **Pictures.** The use of pictures or internationally recognized symbols on signs, labels, and tags is permitted providing the intent of the message remains clear.

#### ■ Availability.

—Hearing protection signs are erected and maintained by the local Directorate of Engineering and Housing (DEH), as directed in AR 420-70.

—Hearing protection labels are available through normal publications channels. Commercially available decals meeting the above criteria are also acceptable.

—Hearing protection tags are currently available only through commercial sources.

### Vision protection signs, tags, and decals

■ **Use.** Use vision protection signs, tags, and decals to warn personnel of potential or actual vision hazards associated with machinery and equipment and to direct that appropriate protective measures be taken. Use warnings not only for physical hazards, but also for laser and high-intensity-light sources such as carbon arc lights, UV sources, welding, etc.

■ **Design.** Similar to decal for hearing protection.

■ **Wording and pictures.** Signs may be CAUTION or DANGER, depending upon the risk. Use words and pictures appropriate to vision protection.

### Accident prevention tags

■ **Use.** Use tags as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment, or operations

that are out of the ordinary, unexpected, or not readily apparent. Tags should be used until the identified hazard is eliminated or the hazardous operation is completed. Tags need

not be used where signs, guarding, or other positive means of protection are being used.

■ **Design.** General tag criteria in 29 CFR 1910.145 will be followed.

## Use of Color Markings

Use of color markings for any purpose will comply with Federal standards and Army regulations.

### Use of paint

Paint-color numbers for markings and signs are listed in table 6. Use high-visibility (fluorescent) paint in the appropriate, similar color when instant recognition is essential. Use luminous (phosphorescent) paint to mark the location of exits or emergency equipment in low-light areas. Materials other than paint, such as decals and tapes, in similar colors may be used for hazard markings and identification. Color coding should not be relied on as the sole means for identification of hazards. When areas require particular emphasis, labels and pictorials should be considered in accordance with guidance contained in this guide.

**Table 6. Paint-Color Numbers From Federal Standard 595A**

| Color   | Gloss | Semigloss | Lusterless |
|---------|-------|-----------|------------|
| Red     | 11105 | 21105*    | 31136      |
| Orange  | 12246 | 22246     | 32246      |
| Yellow  | 13655 | 23655**   | 33538      |
| Green   | 14260 | 24260     |            |
| Blue    | 15102 | 25102     |            |
| Magenta | 17142 | 27142     | 37142      |
| White   | 17875 | 27875     | 37875      |
| Black   | 17038 | 27038     | 37038      |

\*Red No. 21136 may be used instead of 21105.

\*\*Yellow No. 23538 may be used instead of 23655.

**NOTE:** Retroreflective colors shall conform to those colors specified in Federal Specification FP-85.

### Red markings

Use red as the basic color for identifying—

■ Fire detection equipment and fire suppression systems. These include—

—Fire-alarm boxes (pull boxes).

—Fire-blanket boxes.

—Fire-extinguisher containers except for stored pressure water extinguishers.

—Fire extinguishers. For large areas and when the extinguisher is not readily visible to area occupants, use red on the housing wall or support above the extinguisher to show its location.

—Fire-hose location.

—Fire pumps.

—Fire sirens, except vehicular mounted.

—Sprinkler piping (MIL-STD-101B).

—Fire buckets.

—Fire-reporting telephones.

—Emergency-exit signs. An exception consistent with the requirements contained in NFPA 101 may be made to comply with local requirements.

■ Containers of flammable liquids. Safety cans or other portable, service-type containers of flammable liquids having a flashpoint at or below 80°F and table containers of flammable liquids (open-cup tester), excluding shipping containers, will be painted red. In addition, such containers must have some additional clearly visible identification either in the form of a yellow band around the can or the name of the contents conspicuously stenciled or painted on the can in yellow. Containers must be properly labeled with appropriate warnings and contents identified as required by 29 CFR 1910.1200.

■ Danger. This includes—

—Danger signs.

- Stop buttons or electrical switches used for emergency stopping of machinery.
- Emergency stop bars on hazardous machines.

## **Yellow markings**

- Use yellow as the basic color for—
  - Designating caution.
  - Marking dangerous chemicals and physical hazards that one could strike against, stumble over, or get caught in between.
  - Solid yellow, yellow and black stripes, or yellow and black checks in optional dimensions may be used interchangeably. Use the pattern that attracts the most attention in the particular environment.
  - Following are examples of where to use yellow markings for caution:
    - Industrial areas where particular caution is needed, such as the bottom edge of overhead doors, or top and bottom treads and risers of stairways.
    - Fire hydrant barrels (refer to NFPA 291 para 2-2.1 for additional color-coding options for different firefighting hydrant pressure systems).
    - Caution signs.
    - Piping systems containing flammable material (MIL-STD-101B).
    - Waste containers for combustible materials. (List contents using black lettering.)
    - A hazardous floor area.
  - The following are examples of required yellow markings for physical hazards:
    - Lower pulley blocks and cranes that invade personnel area.
    - Coverings and guards for guy wires.
    - Sides of freight-car loading plates or runways. (Put stripes on sides of runways.)
    - Pillars, posts, or columns.
    - Fixtures suspended from ceilings or walls that extend into normal operating areas.
    - Corner markers where material-handling equipment is used.
    - Edges of horizontally closing elevator doors.
    - Exposed edges of platforms, pits, and wells.
    - Required static electricity grounding points (aircraft, communication, generators, POL, etc.). On these points, a yellow circle 18 inches in diameter with a 2-inch black border should encircle each grounding rod permanently installed in a hard surface. The words “static

ground connection” or “static grounding point,” and a numeric or alphanumeric identification of the rod should be stenciled in black on yellow circle. These markings may be painted or decals. However, the material used must be environmentally tolerant and not subject to degradation by POL product spillage. Markings of this type are not required for temporary ground rods.

- Exit passageways in hangars and warehouses.
- Any container containing flammable liquids will be conspicuously painted yellow and marked “Flammable—Keep Fire Away” in red lettering.
- Petroleum product containers used for shipping and storage and issued to TO&E units are excluded from this requirement.

## **Green markings**

Use green as the basic color for designating safety equipment, including the location of first aid and first aid equipment (other than firefighting equipment and ambulance markings). Following are examples of where solid green, green and white stripes, green cross on white background, or white cross on green background should be used.

- **First aid.** Mark the location of—
  - First-aid equipment.
  - First-aid dispensaries.
  - Stretchers.
  - Personnel deluge showers and eyewash sinks.
- **Other.** Mark the location of—
  - Protective masks.
  - Safety starting buttons such as the inching button on dough mixers, metal planers, boring mills, and laundry equipment.
  - Safety instruction signs.
  - Safety bulletin boards.

## **Black, white, and yellow markings**

Black, white, yellow, or combinations of black with white or yellow are the colors for designating traffic or housekeeping markings. The following are examples of where these markings will be used.

- **Traffic.** Examples include—
  - Location and width of aisles in nonhazardous areas.
  - Deadends of aisles or passageways.

—Directional signs.

■ **Housekeeping.** Examples include—

—Location of refuse cans.

—Clear floor areas around first aid, firefighting, and other emergency equipment.

## Blue markings

■ Safety blue is the color for identifying SAFETY INFORMATION on information signs and bulletin boards. Use blue for the outside of switch boxes and electrical controls that are the starting point power source for potentially hazardous electrical machinery and equipment. This requirement does not apply to—

—Quarters.

—Barracks.

—Offices.

—Electrical outlets.

—Room lighting controls.

—Avionics vans.

—Other unmodified, factory-installed equipment where voltage, frequencies, and other characteristics are clearly labeled.

■ Blue has specific applications in railroading and is used to designate warnings against the starting, use, or movement of equipment that is under repair or being worked on.

## Orange markings

■ Use orange as the basic color to—

—Designate dangerous parts of machines or energized equipment where a potential hazard exists that could cut, crush, shock, or injure.

—Emphasize above hazards when enclosure doors are open or when gear, belt, or other guards around moving equipment are opened or removed, exposing unguarded hazards.

■ Per AR 385-64, orange is the standard

background color for fire-hazard symbols required to be posted in explosives storage areas.

■ Per AR 385-63, orange and white markers will be used to designate range limit markers.

## Markings for specific types of signs

■ **Radiation markings.** See 10 CFR, Part 20.203 for ionizing radiation symbols and markings.

■ **Street and highway markings.** Colors of street and highway markings are designated in ANSI D6.1: "Manual on Uniform Traffic Control Devices." Highly visible (according to light conditions) materials in the correct colors may be used. Examples of materials are phosphorescent, fluorescent, and retroreflective paints and tapes.

■ **Markings for pipelines and compressed-gas cylinders.** Color and identification schemes to designate the contents in piping systems and compressed-gas cylinders must conform to MIL-STD-101B, 29 CFR 1910.1200, and 29 CFR 1910.253.

■ **Markings for power conductors.** Color and identification of power conductors, grounding conductors, heating cables, and other power-control equipment must conform to MIL-STD-1957 (EL) and NFPA 70, the National Electrical Code.

■ **Markings for explosives and chemical hazard signs.** See AR 385-64 for explosives safety and AR 385-61 for chemical-agent safety markings.

■ **Markings for range sign.** See AR 385-63 for range sign guidelines.

■ **Markings for biological defense hazard signs.** See AR 385-69 for biological defense hazard signs.

# References

|   |  |
|---|--|
| ANSI D6.1<br>Manual on Uniform Traffic Control Device for Streets and Highways                        | AR 385-64<br>Ammunition and Explosives Standards   |
| ANSI Z48.1<br>Method of Marking Portable Compressed Gas Containers to Identify the Material Contained | AR 385-69<br>Biological Defense Safety Program   |
| ANSI Z129.1-1988<br>Precautionary Labeling of Hazardous Industrial Chemicals                          | AR 420-70<br>Buildings and Structures  |
| ANSI Z136.1<br>Safe Use of Lasers   | AR 750-58<br>Painting, Camouflage Painting, and Marking of Army Material   |
| ANSI Z535.1<br>Safety Color Code  | DA Pam 40-501<br>Hearing Conservation Program  |
| ANSI Z535.2<br>Environmental and Facility Safety Signs  | 10 CFR 20<br>Energy  |
| ANSI Z535.3<br>Criteria for Safety Symbols  | 29 CFR 1910.96<br>Ionizing Radiation   |
| ANSI Z535.4<br>Product Safety Signs and Labels  | 29 CFR 1910.144<br>Safety Color Code for Marking Physical Hazards  |
| AR 11-34<br>Army Respiratory Protection Program   | 29 CFR 1910.145<br>Specifications for Accident Prevention Signs and Tags   |
| AR 40-5<br>Preventive Medicine  | 29 CFR 1910.1200<br>Hazard Communication   |
| AR 385-9<br>Safety Requirements for Military Lasers   | Department of Defense Handbook 6050.5-H<br>Department of Defense Hazard Chemical Warning Labeling System for the Department of Defense |
| AR 385-10<br>Army Safety Program  | Federal Standard No. 89<br>Color Code for Gas Mask Canister Identification.  |
| AR 385-11<br>Ionizing Radiation Protection  | Federal Standard No. 313<br>Material Safety Data Sheets, Preparation and the Submission of   |
| AR 385-61<br>Army's Toxic Chemical Warfare Agent Safety   |  |

Federal Standard No. 595A

Color

International Organization for Standardization  
(ISO) 3864

Safety Signs and Colors

MIL-STD-101B

Color Code for Pipelines and Compressed Gas  
Cylinders

MIL-STD-129J

Marking of Shipment and Storage

MIL-STD-161F

Identification Methods for Bulk Petroleum  
Products Systems, Including Hydrocarbon  
Missile Fuels

MIL-STD-172C

Color Code for Containers of Liquid Propellants

MIL-STD-290E

Packing of Petroleum and Related Products

MIL-STD-454K

General Requirements for Electronic Equipment

MIL-STD-709C

Ammunition Color Coding

MIL-STD-1247B

Marking, Functions, and Hazard Designations  
of Hose, Pipe, and Tube Lines for Aircraft,  
Missiles, and Space Systems

MIL-STD-1425

Safety Design Requirement for Military Lasers  
and Associated Support Equipment

MIL-STD-1472D

Human Engineering Design Criteria for  
Military Systems, Equipment, and Facilities

MIL-STD-1474C

Noise Limits for Military Materiel

MIL-STD-1857 (EL)

Grounding, Bonding, and Shielding Design  
Practices

NFPA 70

National Electrical Code

NFPA 291

Fire Flow Testing and Marking of Fire Hydrants  
(available from the National Fire Protection  
Association, Battery March Park, Quincy, MA  
02269-9101)

TB MED 502

Occupational and Environmental  
Health—Respiratory Program

TB MED 506

Occupational and Environmental  
Health—Occupational Vision

TB MED 523

Control of Hazards to Health from Laser  
Radiation

TB MED 524

Control of Hazards to Health for Laser  
Radiation